U.S. COAST GUARD
MARINE SAFETY OFFICE PORTLAND, MAINE

SAFETY ALERT

Collision Avoidance Advisory

A 60' eastern rigged trawler and a 770' tanker collided in the Gulf of Maine on Sept. 5, 1996. The trawler suffered heavy damage in the incident. Only evasive action taken by the tanker at the last minute prevented the loss of the trawler and possibly the lives of the two fishermen involved in this incident.

While many factors contributed to this collision, Coast Guard investigators believe that commercial fishermen may routinely overestimate the collision avoidance capabilities of large ships and may not recognize steps that should be taken to reduce the risk of being involved in a collision with these massive vessels.

Most of the 1000+ ships that transit the Gulf of Maine each year utilize advanced collision avoidance computers that work off the ships' radar systems. These computers automatically acquire and track radar contacts and sound an alarm if a collision risk exists. These systems are usually extremely accurate and are relied upon by mariners to avoid collisions at sea throughout the world.

Unfortunately, for these systems to be accurate they must detect targets with a strong and constant radar signature. If these ships encounter a smaller vessel with a weak or sporadic radar signature, the collision avoidance computers onboard may incorrectly calculate that the contact is dead in the water and no collision risk exists until the vessels are very close, when evasive action becomes much more difficult to accomplish.

Commercial fishermen can significantly reduce the risk of collision with large vessels by ensuring that their vessels provide very strong and continuous radar signatures at very long ranges. Operators of vessels of wood and fiberglass construction should be especially concerned about their long range radar signatures.

Technical compliance with navigational lighting requirements, including vertical and horizontal spacing requirements, is equally important to ensure that ship operators have an opportunity to visually estimate the heading of an approaching vessel.

Damaged Bow of Fishing Vessel

The most reliable way to ensure strong radar signatures is to ensure flat metal surfaces are provided well above the waterline from all directions. The addition of radar reflectors at mastheads or fitted to metal poles, similar to high flyers used to mark offshore gear, is highly recommended for all vessels of wood or fiberglass construction.

Fishermen should specifically avoid the use of intense lighting in an attempt to increase their chances of being seen by ships. Improved radar signatures provide far better security in collision avoidance situations, and many ship operators may confuse the use of bright lights with active stationary fishing. In close quarter situations, bright work lights can prevent quick identification of sidelights and may actually contribute to a collision. While improved radar signatures may assist in preventing a collision, your best protection at sea is attentive watch keeping and early use of a VHF radio on channel 16 if you suspect a collision risk exists.

For further information on this Safety Alert contact:

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